

ABSTRACT OF THE DISCLOSURE

The present invention is a method for producing a single crystal with pulling the single crystal from a raw material melt by CZ method, wherein when growing the single crystal, where a pulling rate is defined as V , a temperature gradient of the crystal at a central portion of the crystal is defined as G_c , and a temperature gradient of the crystal at a peripheral portion of the crystal is defined as G_e , the temperature gradient G_c at the central portion of the crystal and the temperature gradient G_e at the peripheral portion of the crystal are controlled by changing a distance between the melt surface of the raw material melt and a heat insulating member provided so as to oppose to the surface of the raw material melt, thereby difference ΔG between the temperature gradient G_c at the central portion of the crystal and the temperature gradient G_e at the peripheral portion of the crystal is $0.5\text{ }^{\circ}\text{C/mm}$ or less, and also V/G_c which is a ratio of the pulling rate V and the temperature gradient G_c at the central portion of the crystal is controlled so that a single crystal including a desired defect region can be grown. Thereby, there is provided a method for producing a single crystal in which when the single crystal is grown by CZ method, V/G can be controlled without lowering the pulling rate V , and thus the single

crystal including a desired defect region over a whole plane in the radial direction entirely in the direction of the crystal growth axis can be produced effectively for a short time and at high yield.